

# RAW SEQUENCE LISTING

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Application Serial Number: 09/943,443  
Source: FW16  
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## RAW SEQUENCE LISTING

DATE: 12/23/2008

PATENT APPLICATION: US/09/943,443

TIME: 16:32:02

Input Set : A:\09943443.raw

Output Set: N:\CRF4\12232008\I943443.raw

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1 <110> APPLICANT: ANDERSEN, Peter
2      NIELSEN, Rikke
3      OETTINGER, Thomas
4      RASMUSSEN, Peter Birk
5      ROSENKRANDS, Ida
6      WELDINGH, Karin
7      FLORIO, Walter
8 <120> TITLE OF INVENTION: NUCLEIC ACIDS FRAGMENTS AND POLYPEPTIDE FRAGMENTS
9      DERIVED FROM M. TUBERCULOSIS
10 <130> FILE REFERENCE: 670001-2002.1
11 <140> CURRENT APPLICATION NUMBER: US 09/943,443
12 <141> CURRENT FILING DATE: 2001-08-30
13 <150> PRIOR APPLICATION NUMBER: US/09/050,739
14 <151> PRIOR FILING DATE: 1998-03-30
15 <150> PRIOR APPLICATION NUMBER: 0376/97
16 <151> PRIOR FILING DATE: 1997-04-02
17 <150> PRIOR APPLICATION NUMBER: 1277/97
18 <151> PRIOR FILING DATE: 1997-11-10
19 <150> PRIOR APPLICATION NUMBER: 60/044,624
20 <151> PRIOR FILING DATE: 1997-04-18
21 <150> PRIOR APPLICATION NUMBER: 60/070,488
22 <151> PRIOR FILING DATE: 1998-01-05
23 <160> NUMBER OF SEQ ID NOS: 173
24 <170> SOFTWARE: PatentIn Ver. 2.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 381
28 <212> TYPE: DNA
29 <213> ORGANISM: Mycobacterium tuberculosis
30 <400> SEQUENCE: 1
31      ggccgcccgt acctatgtgg ccgccgatgc tgcggacgcg tcgacctata ccgggttctg 60
32      atcgaaccct gctgaccgag aggacttggt atgtcgcaaa tcatgtacaa ctaccccgcg 120
33      atgttgggtc acgccgggga tatggccgga tatgccggca cgctgcagag cttgggtgcc 180
34      gagatcgccg tggagcaggc cgcgttcgag agtgcgtggc agggcgatac cgggatcacg 240
35      tatcaggcgt ggcaggcaca gtggaaccag gccatggaag atttggtgcg ggcctatcat 300
36      gcgatgtcca gcacccatga agccaacacc atggcgatga tggcccgcga caccgccgaa 360
37      gccgccaat ggggcggcta g                                     381
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 96
41 <212> TYPE: PRT
42 <213> ORGANISM: Mycobacterium tuberculosis
43 <400> SEQUENCE: 2
44      Met Ser Gln Ile Met Tyr Asn Tyr Pro Ala Met Leu Gly His Ala Gly
45      1           5           10           15

```

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46   Asp Met Ala Gly Tyr Ala Gly Thr Leu Gln Ser Leu Gly Ala Glu Ile
47           20                      25                      30
48   Ala Val Glu Gln Ala Ala Leu Gln Ser Ala Trp Gln Gly Asp Thr Gly
49           35                      40                      45
50   Ile Thr Tyr Gln Ala Trp Gln Ala Gln Trp Asn Gln Ala Met Glu Asp
51           50                      55                      60
52   Leu Val Arg Ala Tyr His Ala Met Ser Ser Thr His Glu Ala Asn Thr
53           65                      70                      75                      80
54   Met Ala Met Met Ala Arg Asp Thr Ala Glu Ala Ala Lys Trp Gly Gly
55           85                      90                      95
57 <210> SEQ ID NO: 3
58 <211> LENGTH: 467
59 <212> TYPE: DNA
60 <213> ORGANISM: Mycobacterium tuberculosis
61 <400> SEQUENCE: 3
62   gggtagccgg accacggctg ggcaaagatg tgcaggccgc catcaaggcg gtcaaggccg 60
63   gcgacggcgt cataaaccg gacggcacct tgttggcggg ccccgcggtg ctgacgcccg 120
64   acgagtacaa ctcccggctg gtggccgccc acccgagtc caccgcggcg ttgcccgacg 180
65   gcgcccggct ggtcgttctg gatggcaccg tcaactgccga actcgaagcc gagggctggg 240
66   ccaaagatcg catccgcgaa ctgcaagagc tgcgtaagtc gaccgggctg gacgtttccg 300
67   accgcatccg ggtggtgatg tcggtgcctg cggaacgcga agactgggcg cgcacccatc 360
68   gcgacctcat tgccggagaa atcttggtta cgcacttcga attcgccgac ctgcgccgatg 420
69   gtgtggccat cggcgacggc gtgcgggtaa gcatcgaaaa gacctga 467
71 <210> SEQ ID NO: 4
72 <211> LENGTH: 108
73 <212> TYPE: PRT
74 <213> ORGANISM: Mycobacterium tuberculosis
75 <400> SEQUENCE: 4
76   Met Ala Ala Asp Pro Glu Ser Thr Ala Ala Leu Pro Asp Gly Ala Gly
77   1           5           10           15
78   Leu Val Val Leu Asp Gly Thr Val Thr Ala Glu Leu Glu Ala Glu Gly
79           20           25           30
80   Trp Ala Lys Asp Arg Ile Arg Glu Leu Gln Glu Leu Arg Lys Ser Thr
81           35           40           45
82   Gly Leu Asp Val Ser Asp Arg Ile Arg Val Val Met Ser Val Pro Ala
83           50           55           60
84   Glu Arg Glu Asp Trp Ala Arg Thr His Arg Asp Leu Ile Ala Gly Glu
85           65           70           75           80
86   Ile Leu Ala Thr Asp Phe Glu Phe Ala Asp Leu Ala Asp Gly Val Ala
87           85           90           95
88   Ile Gly Asp Gly Val Arg Val Ser Ile Glu Lys Thr
89           100          105
91 <210> SEQ ID NO: 5
92 <211> LENGTH: 889
93 <212> TYPE: DNA
94 <213> ORGANISM: Mycobacterium tuberculosis
95 <400> SEQUENCE: 5
96   cgggtctgca cggatccggg ccgggcaggg caatcgagcc tgggatccgc tgggggtgcgc 60
97   acatcgcgga cccgtgcgcg gtacggtcga gacagcggca cgagaaagta gtaagggcga 120

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98 taataggcgg taaagagtag cgggaagccg gccgaacgac tcggtcagac aacgccacag 180
99 cggccagtga ggagcagcgg gtgacggaca tgaaccggga tattgagaag gaccagacct 240
100 ccgatgaagt cacggtagag acgacctccg tcttcgcgc agacttcctc agcgagctgg 300
101 acgtctctgc gcaagcgggt acggagagcg cggctcctcg ggtggaaggg ctcccgcgg 360
102 gctcggcggt gctggtagtc aaacgaggcc ccaacgcggg gtcccgggtc ctactcgacc 420
103 aagccatcac gtcggctggt cggcatcccg acagcgacat atttctcgac gacgtgaccg 480
104 tgagccgctg ccatgctgaa ttccggttg aaaacaacga attcaatgtc gtcgatgtcg 540
105 ggagtctcaa cggcacctac gtcaaccgag agcccgtgga ttccggcggtg ctggcgaacg 600
106 gcgacgaggt ccagatcggc aagttccggt tgggtgttctt gaccggaccc aagcaaggcg 660
107 aggatgacgg gagtaccggg ggcccgtgag cgcacccgat agccccgcgc tggccgggat 720
108 gtcgatcggg gcggtcctcg acctgctacg accggatttt cctgatgtca ccatctccaa 780
109 gattcgattc ttggaggctg agggctctgg gacgccccgg cgggcctcat cgggggtatcg 840
110 gcggttcacc gcatacgact gcgcacggct gcgattcatt ctcaactgcc 889

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112 &lt;210&gt; SEQ ID NO: 6

113 &lt;211&gt; LENGTH: 162

114 &lt;212&gt; TYPE: PRT

115 &lt;213&gt; ORGANISM: Mycobacterium tuberculosis

116 &lt;400&gt; SEQUENCE: 6

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117 Met Thr Asp Met Asn Pro Asp Ile Glu Lys Asp Gln Thr Ser Asp Glu
118 1 5 10 15
119 Val Thr Val Glu Thr Thr Ser Val Phe Arg Ala Asp Phe Leu Ser Glu
120 20 25 30
121 Leu Asp Ala Pro Ala Gln Ala Gly Thr Glu Ser Ala Val Ser Gly Val
122 35 40 45
123 Glu Gly Leu Pro Pro Gly Ser Ala Leu Leu Val Val Lys Arg Gly Pro
124 50 55 60
125 Asn Ala Gly Ser Arg Phe Leu Leu Asp Gln Ala Ile Thr Ser Ala Gly
126 65 70 75 80
127 Arg His Pro Asp Ser Asp Ile Phe Leu Asp Asp Val Thr Val Ser Arg
128 85 90 95
129 Arg His Ala Glu Phe Arg Leu Glu Asn Asn Glu Phe Asn Val Val Asp
130 100 105 110
131 Val Gly Ser Leu Asn Gly Thr Tyr Val Asn Arg Glu Pro Val Asp Ser
132 115 120 125
133 Ala Val Leu Ala Asn Gly Asp Glu Val Gln Ile Gly Lys Phe Arg Leu
134 130 135 140
135 Val Phe Leu Thr Gly Pro Lys Gln Gly Glu Asp Asp Gly Ser Thr Gly
136 145 150 155 160
137 Gly Pro

```

139 &lt;210&gt; SEQ ID NO: 7

140 &lt;211&gt; LENGTH: 898

141 &lt;212&gt; TYPE: DNA

142 &lt;213&gt; ORGANISM: Mycobacterium tuberculosis

143 &lt;400&gt; SEQUENCE: 7

```

144 tcgactccgg cgccaccggg caggatcacg gtgtcgacgg ggtcgccggg gaatcccacg 60
145 ataaccactc ttcgcgccat gaatgccagt gttggccagg cgctggcctg gcgtccacgc 120
146 cacacaccgc acagattagg acacgccggc ggcgagccc tgcccgaag accgtgcacc 180
147 ggtcttggca gactgtgcc atggcacaga taaccctgcg aggaaacgcg atcaataaccg 240
148 tcggtgagct acctgctgtc ggatccccgg ccccgccctt caccctgacc gggggcgatc 300

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149      tgggggtgat cagcagcgac cagttccggg gtaagtccgt gttgctgaac atctttccat 360
150      ccgtggacac accggtgtgc gcgacgagtg tgcgaacctt cgacgagcgt gcggcggcaa 420
151      gtggcgctac cgtgctgtgt gtctcgaagg atctgccgtt cggccagaag cgcttctgcg 480
152      gcgccgaggg caccgaaaac gtcattgccc cgctcggcatt ccgggacagc ttcggcgagg 540
153      attacggcgt gaccatcgcc gacggggcga tggccgggct gctcggccgc gcaatcgtgg 600
154      tgatcggcgc ggacggcaac gtcgcctaca cggaattggt gccggaaatc gcgcaagaac 660
155      ccaactacga agcggcgctg gccgcgctgg gcgcctaggc tttcacaagc cccgcgcgtt 720
156      cggcgagcag cgcacgattt cgagcgctgc tcccgaagag cgctcgggtg gtcttggtccc 780
157      ggcggttaata caggtgcagg tcgtgctccc acgtgaaggc gatggcaccg tggatctgaa 840
158      gagcggagcc ggcgcataac acaaaggttt ccgcggtctg cgccttcgcc agcggcgc 898

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160 &lt;210&gt; SEQ ID NO: 8

161 &lt;211&gt; LENGTH: 165

162 &lt;212&gt; TYPE: PRT

163 &lt;213&gt; ORGANISM: Mycobacterium tuberculosis

164 &lt;400&gt; SEQUENCE: 8

```

165      Met Ala Gln Ile Thr Leu Arg Gly Asn Ala Ile Asn Thr Val Gly Glu
166      1          5          10          15
167      Leu Pro Ala Val Gly Ser Pro Ala Pro Ala Phe Thr Leu Thr Gly Gly
168      20          25          30
169      Asp Leu Gly Val Ile Ser Ser Asp Gln Phe Arg Gly Lys Ser Val Leu
170      35          40          45
171      Leu Asn Ile Phe Pro Ser Val Asp Thr Pro Val Cys Ala Thr Ser Val
172      50          55          60
173      Arg Thr Phe Asp Glu Arg Ala Ala Ala Ser Gly Ala Thr Val Leu Cys
174      65          70          75          80
175      Val Ser Lys Asp Leu Pro Phe Ala Gln Lys Arg Phe Cys Gly Ala Glu
176      85          90          95
177      Gly Thr Glu Asn Val Met Pro Ala Ser Ala Phe Arg Asp Ser Phe Gly
178      100         105         110
179      Glu Asp Tyr Gly Val Thr Ile Ala Asp Gly Pro Met Ala Gly Leu Leu
180      115         120         125
181      Ala Arg Ala Ile Val Val Ile Gly Ala Asp Gly Asn Val Ala Tyr Thr
182      130         135         140
183      Glu Leu Val Pro Glu Ile Ala Gln Glu Pro Asn Tyr Glu Ala Ala Leu
184      145         150         155         160
185      Ala Ala Leu Gly Ala
186      165

```

188 &lt;210&gt; SEQ ID NO: 9

189 &lt;211&gt; LENGTH: 1054

190 &lt;212&gt; TYPE: DNA

191 &lt;213&gt; ORGANISM: Mycobacterium tuberculosis

192 &lt;400&gt; SEQUENCE: 9

```

193      ataatcagct caccgttggg accgacctcg accaggggtc ctttgtgact gccgggcttg 60
194      acgcgagcga ccacagagtc ggtcatcgcc taaggctacc gttctgacct ggggctgcgt 120
195      gggcgccgac gacgtgaggc acgtcatgtc tcagcggccc accgccacct cggtcgccgg 180
196      cagtatgtca gcatgtgcag atgactccac gcagccttgt tcgcatcggt ggtgtcgtgg 240
197      ttgcgacgac cttggcgctg gtgagcgcac ccgccggcgg tcgtgccgcg catgcggatc 300
198      cgtgttcgga catcgcggtc gttttcgctc gcggcacgca tcaggcttct ggtcttggtg 360
199      acgtcgggtga ggcggttcgc gactcgctta cctcgcaagt tggcggggcg tcgattgggg 420

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200      tctacgcggt gaactaccca gcaagcgacg actaccgcgc gagcgcgtca aacggttccg 480
201      atgatgcgag cgccacatc cagcgcaccg tcgccagctg cccgaacacc aggattgtgc 540
202      ttggtggcta ttcgcagggt gcgacgggtc tcgatttgtc cacctcggcg atgccgccc 600
203      cggtggcaga tcatgtcgcc gctgtcgccc ttttcggcga gccatccagt ggtttctcca 660
204      gcatgttggt gggcggcggg tcgttgccga caatcgggtc gctgtatagc tctaagacca 720
205      taaacttggt tgctcccgac gatccaatat gcaccggagg cggcaatatt atggcgcatg 780
206      tttcgtatgt tcagtcgggg atgacaagcc aggcggcgac attcgcggcg aacaggctcg 840
207      atcacgccgg atgatcaaag actgttggtc ctataccgct ggggctgtag tcgatgtaca 900
208      ccggctggaa tctgaagggc aagaaccggg tattcatcag gccggatgaa atgacggctg 960
209      ggcggtaatc gtttggtgtg aacgcgtaga gccgatcacc gccggggctg gtgtagacct 1020
210      caatgtttgt gttcgccggc agggttccgg atcc                                     1054

```

212 &lt;210&gt; SEQ ID NO: 10

213 &lt;211&gt; LENGTH: 217

214 &lt;212&gt; TYPE: PRT

215 &lt;213&gt; ORGANISM: Mycobacterium tuberculosis

216 &lt;400&gt; SEQUENCE: 10

```

217      Met Thr Pro Arg Ser Leu Val Arg Ile Val Gly Val Val Val Ala Thr
218      1          5          10          15
219      Thr Leu Ala Leu Val Ser Ala Pro Ala Gly Gly Arg Ala Ala His Ala
220      20          25          30
221      Asp Pro Cys Ser Asp Ile Ala Val Val Phe Ala Arg Gly Thr His Gln
222      35          40          45
223      Ala Ser Gly Leu Gly Asp Val Gly Glu Ala Phe Val Asp Ser Leu Thr
224      50          55          60
225      Ser Gln Val Gly Gly Arg Ser Ile Gly Val Tyr Ala Val Asn Tyr Pro
226      65          70          75          80
227      Ala Ser Asp Asp Tyr Arg Ala Ser Ala Ser Asn Gly Ser Asp Asp Ala
228      85          90          95
229      Ser Ala His Ile Gln Arg Thr Val Ala Ser Cys Pro Asn Thr Arg Ile
230      100         105         110
231      Val Leu Gly Gly Tyr Ser Gln Gly Ala Thr Val Ile Asp Leu Ser Thr
232      115         120         125
233      Ser Ala Met Pro Pro Ala Val Ala Asp His Val Ala Ala Val Ala Leu
234      130         135         140
235      Phe Gly Glu Pro Ser Ser Gly Phe Ser Ser Met Leu Trp Gly Gly Gly
236      145         150         155         160
237      Ser Leu Pro Thr Ile Gly Pro Leu Tyr Ser Ser Lys Thr Ile Asn Leu
238      165         170         175
239      Cys Ala Pro Asp Asp Pro Ile Cys Thr Gly Gly Gly Asn Ile Met Ala
240      180         185         190
241      His Val Ser Tyr Val Gln Ser Gly Met Thr Ser Gln Ala Ala Thr Phe
242      195         200         205
243      Ala Ala Asn Arg Leu Asp His Ala Gly
244      210         215

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246 &lt;210&gt; SEQ ID NO: 11

247 &lt;211&gt; LENGTH: 949

248 &lt;212&gt; TYPE: DNA

249 &lt;213&gt; ORGANISM: Mycobacterium tuberculosis

250 &lt;400&gt; SEQUENCE: 11